Worcestershire Acute Hospitals NHS Trust

Multiple Pregnancy

This guidance does not override the individual responsibility of health professionals to make appropriate decision according to the circumstances of the individual patient in consultation with the patient and /or carer. Health care professionals must be prepared to justify any deviation from this guidance.

Introduction

This Guideline is to provide information on the management of multiple pregnancy.

This guideline is for use by the following staff groups:
All staff involved with the care and care planning of multiple pregnancies.

Lead Clinician(s)

Approved by *Maternity Governance Meeting* on: 20th October 2023

Approved by Medicines Safety Committee on: N/A

Review Date: 20th October 2026
This is the most current document and should be used until a revised version is in place

Key amendments to this guideline

Date	Amendment	Approved by:
Oct 23	Document reviewed	Maternity Governance Meeting

Introduction

Multiple pregnancy is associated with increased perinatal morbidity and mortality

- Triplets have 2.4 x the risk of handicap as twins
- Cerebral palsy 4.5 x greater in twins compared to singletons
- Increased Perinatal Mortality Rate beyond 39 weeks
- Congenital anomalies are 1.3 x relative risk of singletons
- Smoking has major effect on multiple pregnancy
- Preterm labour 22 – 28 weeks
- Late loss – 34 weeks onwards

Monochorionic Twins

- Increase in perinatal mortality rate (16–24 weeks greatest risk of twin to twin transfusion) are associated with monochorionic twins

Antenatal Management

Dating scan & Chorionicity

Chorionicity should be established in 100% of cases. If in doubt about chorionicity the patient should be referred to Ultrasound Department/fetal medicine clinic/Multiple Pregnancy clinic (in WRH).

Chorionicity should be documented in the badgernet records.

Aim to determine all of the following in the same first trimester scan when crown–rump length measures from 45 mm to 84 mm (at 11^{+2} - 14^{+1} weeks)

- Gestational age
- Chorionicity (see below) and
- The risk of Down's syndrome.

Assign nomenclature to the babies (for example, upper and lower, or left and right) and document.

Use the largest baby to measure gestational age.

Prenatal screening and diagnosis.

Both these aspects of antenatal care in multiple pregnancies are complicated. All women with multiple pregnancies should be given the "Screening for Down's syndrome in multiple pregnancy" leaflet on diagnosis. Carry out screening when crown–rump length measures from 45 mm to 84 mm (at approximately 11^{+2} - 14^{+1} weeks). Map fetal positions. Calculate risk per pregnancy in monochorionic pregnancies and for each baby in dichorionic and trichorionic pregnancies.

Before screening, inform women about the:

- greater likelihood of Down's syndrome in twin and triplet pregnancies
- different options for screening
- higher false positive rate of screening tests in twin and triplet pregnancies
- greater likelihood of being offered invasive testing and of complications occurring from this testing physical and psychological risks related to selective fetal reduction.

Indication for referral
Offer women whose risk of Down's syndrome exceeds 1:150 (as defined by the NHS Fetal Anomaly Screening Programme [FASP]) referral to BWH.

Consultant led antenatal care: All women with multiple pregnancies should be offered consultant led care. Referral should occur at diagnosis as appointments may take some time.

These women should preferably be seen by the consultant each antenatal clinic visit. Women with multiple pregnancy should be offered information and emotional support specific to twin and triplet pregnancies in beginning of pregnancy, preferably at their first antenatal appointment and provided with ongoing opportunities for further discussion and advice including information regarding:

- Antenatal and postnatal mental health and wellbeing
- Antenatal nutrition
- Common complications of multiple pregnancy (see below)
- Routine schedule of antenatal visits.
- Place of delivery: Women should be informed that the delivery should take place in the delivery suite.
- Risks and benefits of different modes of elective delivery to support women in planning for birth.
- Place and timing of elective birth - *By 32 weeks all women should be given information regarding risks & benefits of modes and timing of elective delivery. This information should be recorded in the badgernet record.*
- Breastfeeding & parenting (this information is discussed at multiple pregnancy support group sessions)

The management of multiple pregnancy checklist should be completed at first ANC visit (by 16-18 weeks unless a late booker) following consultant review. If the consultant is not present at first ANC visit, the checklist should be countersigned by the consultant when they first review the patient in ANC to confirm provision of information regarding risks and management plan. The checklist is available in Antenatal Clinics (SF-WR2456 Uncomplicated Multiple Pregnancy Checklist).

Management plan may vary in individual patients. This checklist should be filed next to the management plan section in the patient held record. Any additional instructions along with any change in management plan later in pregnancy should be documented clearly in both patient held and hospital records.

Multiple Pregnancy Support Group:
Information regarding multiple pregnancy support group(s) should be given to all the women with multiple pregnancy. Information leaflets are available in the badgernet library.

Follow up in the community
Although most of the antenatal care for women with a multiple pregnancy should be consultant led, they still need to be seen by their community midwives in antenatal period. Appointments with community midwife may need to be arranged on individual case basis. This should be clearly communicated to the community midwife and documented in the notes. The community midwife will look after the women and their babies in postnatal period.

WRH: All women with multiple pregnancies should be referred to Multiple Pregnancy clinic for their antenatal care. Due to consultant leave these women may occasionally be seen in routine antenatal clinic, following a scan in radiology department. If there is any concern about fetal growth restriction or feto-fetal transfusion syndrome (FFTS) the woman should be seen,

scanned and followed up by the consultant with expertise in fetal medicine locally or referred to Birmingham Women's Hospital (BWH).

Kidderminster: All women with multiple pregnancies should be referred to lead obstetrician for their antenatal care. If there is any concern about fetal growth restriction or FFTS the woman should be seen, scanned and followed up by the consultant with expertise in fetal medicine locally or referred to BWH.

Alexandra Hospital: All women with multiple pregnancies should be referred to a consultant obstetrician for their antenatal care. If there is any concern about fetal growth restriction or FFTS the woman should be seen, scanned and followed up by the consultant with expertise in fetal medicine locally or referred to BWH.

Clear plan of management should be documented in badgernet record.

Mid-trimester anomaly scan
Detailed anomaly scan should be offered at 18 - 22 weeks.

Complications of multiple pregnancy
There is a higher risk of the following antenatal complications and it should be discussed with the woman:

- **Anaemia.** FBC should be checked at booking then at 20-24 weeks. FBC should be repeated and red cell antibodies should be checked at 28 weeks. Iron supplement if needed.
- **Preterm Delivery:** No intervention has shown to prevent preterm labour & birth in twin pregnancy. Women should however be warned that preterm delivery is a greatest risk in multiple pregnancy and they should be aware of the signs and symptoms. The potential need for corticosteroids for fetal lung maturation should be discussed with the woman.
- **Fetal growth restriction (FGR) and Small for Gestational Age (SGA)**: Estimate fetal weight discordance using two or more biometric parameters at each ultrasound scan from 20 weeks. Aim to undertake scans for growth at intervals of 4 weeks or less. Consider a 25% or greater difference in size between twins or triplets as a clinically important indicator of intrauterine growth restriction and offer referral to a tertiary level fetal medicine centre if no local expertise available. If there is evidence of fetal growth restriction / discordance follow guidelines on FGR/SGA & arrange monitoring by USS accordingly.

  Do not use:
  - abdominal palpation or symphysis–fundal height measurements to predict intrauterine growth restriction.
- **Pre-eclampsia:** if a woman has one or more of the following risk factors for hypertension she should be prescribed 75 mg of aspirin daily from 12 weeks until the birth of the babies (as per aspirin guideline):
  - first pregnancy
  - age 40 years or older
  - pregnancy interval of more than 10 years
  - BMI of 35 kg/m2 or more at first visit
  - family history of pre-eclampsia.

Feto-Fetal Transfusion Syndrome (FFTS)
The clinical syndrome of feto-fetal transfusion syndrome (FFTS) affects 15-20% of MC pregnancies, usually in the second trimester. If left untreated it can have 80% mortality for both twins.

Do not monitor for (FFTS) in the first trimester.

Monitor with fortnightly ultrasound for FFTS (including to identify membrane folding) from 16 weeks until 24 weeks and thereafter with every growth scan (3-4 weekly).

If membrane folding or other possible signs (pregnancies with inter-twin membrane infolding and amniotic fluid discordance) are found, monitor weekly to allow time to intervene if needed.

Scan Appearance of FFTS:

- Monochorionic twins
- Discordant growth
- Twin oligohydramnios - polyhydramnios sequence.
- Smaller twin – oligohydramnios
- Larger twin – polyhydramnios

Staging of twin-twin transfusion syndrome

I- Donor bladder visible & normal doppler
II- Donor bladder empty & normal Doppler
III- Donor bladder empty & abnormal doppler
IV- Hydrops
V- Demise of one/both twins.

Criteria for abnormal Doppler

- Umbilical artery: Absent/reverse end-diastolic flow.
- Umbilical vein: Pulsatile flow
- Ductus venosus: Reverse flow

If there are concerns about possible FFTS or significant growth discrepancy these cases should be referred to the fetal medicine unit in Birmingham Women's Hospital (BWH).

Serial ultrasound scan

Each clinic should have access to ultrasound scan & doppler facilities.

Dichorionic:

- U/S scan 11^{+2} - 14^{+1} weeks (viability/chorionicity/ Nuchal Translucency)
- Structural anomaly scan at 20-22 wks
- Growth scans from 20 weeks: Aim to undertake scans at intervals of 4 weeks or less. Women with DCDA twins should be seen fortnightly for their BP check and urinalysis after 32 weeks. This check/appointment can be arranged with the community midwife if no scan is required.

Monochorionic:

- U/S scan at 11^{+2} - 14^{+1} weeks (viability / chorionicity / Nuchal Translucency)
- U/S scan from 16 wks every 2 wks till 24 weeks (growth/liquor/monitor for Twin- to-Twin Transfusion Syndrome) followed by growth scans at intervals of 4 weeks or less.
- Structural anomaly scan at 18 - 20 wks
- A scan for extended views of fetal heart should be performed in the fetal medicine clinic (WRH & Alexandra hospital) or multiple pregnancy clinic (WRH).

Indications for referral to a tertiary level fetal medicine centre

Seek opinion from a tertiary level fetal medicine centre for:

- monochorionic monoamniotic triplet pregnancies
- monochorionic diamniotic triplet pregnancies
- dichorionic diamniotic triplet pregnancies
- pregnancies complicated by any of the following:
- discordant fetal growth
- fetal anomaly
- FFTS
- Discordant fetal death

Timing and mode of Delivery
If pregnancy is uncomplicated:

Dichorionic-Diamniotic (DCDA):

- In uncomplicated DCDA twins offer elective birth at 37 weeks.

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Monochorionic Diamniotic (MCDA):

- In uncomplicated MCDA twins offer elective birth at 36 weeks. NICU has to be informed and IOL/ delivery conducted after their approval.

Monochorionic Monoamniotic

- Offer delivery by elective caesarean section at 32 weeks, after giving antenatal steroids (for enhancing fetal lung maturity). NICU has to be informed and delivery conducted after their approval.

Corticosteroids should be given to reduce the risk of respiratory morbidity in all babies delivered by elective caesarean section prior to 38^{+6} weeks' gestation.

If elective birth is declined, offer weekly appointments with the specialist obstetrician. Offer an ultrasound scan at each appointment (perform fortnightly fetal growth scans and weekly biophysical profile assessments).

Induction of Labour (IOL)
This should follow the IOL guideline with appropriate monitoring of all babies. IOL should occur in delivery suite.

IOL should be avoided in a multiple pregnancy with previous caesarean section due to increased risks.

Mode of Delivery
Monoamniotic:

- Delivery by caesarean section is recommended in these instances.

Diamniotic

- This should take into account, antenatal complications, past obstetric history, presentation of the leading twin and wishes of the parents. The agreed mode of delivery should be documented in the notes after discussion with the parents.
- If the first twin is vertex presentation delivery by vaginal mode is possible.
- If first twin is non-vertex presentation delivery by caesarean section is recommended.

- Parents should be counselled about the increased risk of emergency caesarean delivery in labour for both twins at approximately 30-40% and risk of vaginal birth of one followed by caesarean delivery of the second twin is approximately 5%.

- There is a higher risk of scar complications and emergency caesarean section in woman with previous caesarean section. If VBAC is preferred by the woman, there should be thorough counselling in the antenatal period with the named consultant (and consultant MW if required), utilising the BRAIN acronym (see Antenatal Guideline).

Management of Labour
Documentation
All care should be documented in the mother's badgernet record as for singleton (see maternity records policy). Two neonatal notes (white) need to be completed and both post birth forms completed on badgernet.

You must ensure the correct NHS number is assigned to the correct baby.

Admission in Labour
- All women expecting twins should be admitted to delivery suite in labour and routine admission undertaken by the midwife including palpation, auscultation and confirmation of presenting parts.
- The obstetric registrar should be informed of the woman's admission, who will see the woman and discuss plan of care with the woman and midwife and inform the on call Consultant.
- If both twins are cephalic presentation, and >36/40 gestation the care and delivery can be midwife led.
- Progress in labour is documented in the Labour notes and the partogram, progress in labour is expected to be the same as for singletons.

Labour
- I/V access – take blood for FBC, group and save serum.
- Clear fluids only.
- Continuous CTG for both twins throughout labour, is recommended. If it's not possible to obtain two distinct traces then ARM and fetal scalp electrode (FSE) should be considered for first twin.
- Discuss analgesia – the woman may choose what form of analgesia required.
- <u>Epidural Analgesia</u>

  Advantage: An epidural is of value as there is a high risk of intervention and occasionally this needs to be performed urgently. A fully effective epidural in second stage is useful in external cephalic version / internal podalic version if the presentation of 2nd twin is not cephalic, instrumental vaginal delivery and it reduces the risk of general anaesthesia if urgent caesarean delivery is required.

  Disadvantage: Reduction in effective maternal effort, which increases the risk of assisted delivery.

Delivery

Preparation:

- Obstetric Registrar/On-call Consultant present in the delivery room but the delivery may be conducted by a midwife.
- The Anaesthetist should be present on delivery suite and obstetric theatre and theatre staff available.
- 2 resuscitaires' should be checked and ready in the room.
- Paediatricians x 2 if necessary,
- Usual delivery pack but additional cord clamps should be available for distinguishing between the umbilical cords.
- 2 sets labels ready for babies.
- Emergency resuscitation equipment should be available outside the room for the mother
- Equipment for vacuum/forceps delivery and suturing should be available outside the room
- Oxytocin should be made available to prepare as an infusion as per Induction of Labour for use after delivery twin one if necessary.
- Syntometrine available for active management of the third stage.
- A second dose of Oxytocin should be made available to commence post-delivery for prevention of PPH if necessary.

Twin One

- If cephalic, uncomplicated and term a midwife may conduct the delivery with support from senior team.
- Identify cord one with umbilical cord clamp.

Twin Two

- If vertex and uncomplicated – the midwife may conduct the delivery with support from senior team.
- If high vertex or any other presentation the senior registrar/ consultant should conduct or assist in delivery.
- After delivery of the first twin it may be necessary to have someone 'stabilize' the second twin by abdominal palpation while a VE is performed to assess the station of the presenting part.
- Ultrasound scan may need to be performed to confirm presentation
- Begin oxytocin infusion after delivery of twin one as per Induction of Labour guideline if there are no uterine contractions after 10 minutes of first birth.
- Allow the presenting part to descend.
- <u>Do not rupture the second sac until the presenting part descends into the pelvis or if breech - when a foot or feet is grasped.</u>
- Rupture the membranes at the peak of a contraction.
- Continue the delivery as normal

- If breech presentation – facilitate breech birth (with interventions if becomes necessary).
- If the second twin lies transverse after the delivery of the first twin, external cephalic or internal podalic version is appropriate. If still transverse (particularly likely if the back is towards the fundus), the choice is between breech extraction (gentle continuous traction on one or both feet through intact membranes) or caesarean section.

Twin I – Twin II Delivery interval.

- Prolonged inter-delivery interval between first and second twin increases the risks of fetal distress and acidosis in the second twin.
- The time interval between the twins is usually 30-60 minutes unless there are CTG concerns requiring immediate intervention. In most cases it will be up to 30 minutes.
- Expedite the delivery of the second twin if his/her condition is uncertain at any stage.

Following Delivery

The risk of PPH is increased:

- Give Syntometrine 1amp intramuscularly for active management of third stage unless hypertensive in which case give oxytocin 10IU.
- Commence prophylaxis with oxytocin infusion (40 units in 500ml Hartmans) at 125ml per hour unless fluid restricted. If fluid restricted, use 40 units in 40mls Hartmans 10ml per hour by syringe driver and then review by medical staff.
- Perineal repair should be undertaken as soon as possible to prevent further blood loss.

Care of the Twins

Routine care of the babies as with singletons, both twins should stay with the mother if at all possible, breast feeding is encouraged.

Triplets and higher order multiple pregnancy

- Consider these pregnancies as high risk both antenatally and at the delivery.
- For Down syndrome screening for triplet pregnancy a fetal medicine consultant appointment should be offered who can perform NT + age screening by using FMF software, if requested.
- Management should be individualised including place, mode and timing of delivery. Aim for delivery by 35 weeks.
- There are also more postnatal complications – especially postpartum haemorrhage.
- Always cross-match for the delivery.
- Liaise with the paediatricians.
- Generally management is in line with the principles outlined for MC twins, although caesarean delivery is more common. Check for any particular delivery plan in the notes and notify the consultant on-call.
- Be aware that extra staff of all grades may need to be called for the delivery.
- Higher order pregnancies other than uncomplicated triplets should be referred to tertiary fetal medicine unit.

Some mothers/parents may choose to decline WAHT recommendations. These cases should be discussed with the obstetric consultant responsible and consultant midwife. The Out of Guidance guideline should be followed in these cases.

The plan should be clearly documented in badgernet record.

Monitoring

Page/ Section of Key Document	Key control:	Checks to be carried out to confirm compliance with the Policy:	How often the check will be carried out:	Responsible for carrying out the check:	Results of check reported to: *(Responsible for also ensuring actions are developed to address any areas of non-compliance)*	Frequency of reporting:
	WHAT?	**HOW?**	**WHEN?**	**WHO?**	**WHERE?**	**WHEN?**

Contribution List

This key document has been circulated to the following individuals for consultation;

Designation
All Maternity staff (Newsletter)
Maternity Governance Meeting Group

This key document has been circulated to the chair(s) of the following committee's / groups for comments;

Committee
Maternity Quality Governance Meeting